U.S. Environmental Protection Agency
Science Advisory Board
SAB Workgroup on Residue Sampling Plan
Collected Individual Comments on "Emergency Response Quality Assurance Sampling Plan for Hurricane Katrina Response Screening Level Sampling for Sediment in Areas where Flood Water Receded, Southeast Louisiana"

Comments were received after 11 a.m. on September 13, and before 12:30 p.m.

NOTE: The Workgroup will have a public conference call meeting
Tuesday, September 13 from 1-4 Eastern Time
For Further Information, visit www.epa.gov/sab

John Maney (additional summary by charge question)

LESSON LEARNED!

Going forward the Agency should draft and peer review QASP outlines for floodwaters, residual sediments and other media, since this would, before the emergency, address and resolve issues such as;

- What questions need to be answered
- What decisions need to made
- Agency preference for biased vs. probabilistic sampling
- The chemical, physical and biological agents of concern

CHARGE QUESTIONS

I. Are the project objectives and the preliminary nature of this plan clearly stated ?

No. Although the QASP is an excellent staring point, it lacks specificity and consistency in its objective and there is a disconnect between the stated objective and how the QASP indicates the collected data will be used in decision-making.

The objective uses terms such as 'nature" and screening intermittently and then casually changes the inferred population between 'all residential areas' to those 'where water recently receded'.

Likewise, the proposed use of data differs from the preliminary nature of the objectives. Screening type data is proposed to make final risk/risk management decisions.

II. Please comment on the validity of the sampling approach and the adequacy of the methods to accomplish the project objectives.

The proposed sampling design will not generate data that will support the QASP specified data uses.

The sampling approach is based on biased sampling (judgmental sampling) and a number of assumptions that need to be validated. A probabilistic sampling design could be implemented with an additional but minimum effort and result in a dramatic increase in the usability of the data.

Likewise, the issue of subsampling must be addressed to ensure that analytical aliquots are representative of the field sampled from which they are taken.

III. Are the requirements for containers, preservation techniques, sample volumes, and holding times (Table 4-1) appropriate for the listed analyte categories?

The table has to be modified to accommodate the proposed list of pathogens and to correct the VOCs sample container requirements.

IV. Are the analytical methods to be used appropriate for the matrix being sampled?

The QASP needs to be more specific in specifying analyte lists, [e.g., including the identification of GC/MS tentatively identified compounds (TICs) and TPH report content (FID chromatograms)] and laboratory quality control requirements.

V. The SAB's advice on constituent analysis would also be appreciated.

Besides the pathogens identified by other commenters, LC/MS/MS analytes should be considered, if they are likely to be an issue regarding exposure from sediments.

Lastly, additional analyses such as particle size analysis and TCLP analyses should be considered since they may be able to answer the next burning question.

VI. Please comment on the adequacy and the transparency of the quality assurance plan and the plan for project documentation.

Although the QASP contains much of value and is a good starting point, the specified sampling and analytical design does not support the objectives or the proposed data use.

LOUIS THIBODEAUX

I have read the doc plans and believe it to be a generally a good one.

- Are the project objectives and the preliminary nature of this plan clearly stated ?

YES . THE RESIDENTIAL AREA SHOULD BE IN NO SO AS TO MAINTAIN NEEDED BIAS. IN MY OPINION.

- Please comment on the validity of the sampling approach and the adequacy of the methods to accomplish the project objectives.

HOMES ARE PARTICLE TRAPS. TYPICALLY WATERS WITH TSS ENTER THE FRONT "DOOR" AND ARE RETAINED FOR LONG TIME-PERIODS IN A LOW TURBULENCE STATE BEFORE MUCH CLEANER TSS WATERS FLOW OUT THE "BACKDOOR". TO ASSUME YARD SURFICIAL SAMPLE WILL BE OF EQUAL QUALITY IS PROBLEMATIC IN MY OPINION. SO IF HOMES CANNOT BE ENTERED FOR WHATEVER REASON THEN OTHER BUILDINGS WHICH HAVE SIMILAR DEPOSITION ENVIRONMENTS SHOULD BE TARGETED FOR SAMPLING OR SOME DEGREE OF BIASNESS WILL BE LOST.

THE TARGETED SEDIMENTS ARE BOTTOM SEDIMENTS OR THOSE THAT SETTLE FROM THE WATER COLUMN AND THIS IS AS IT SHOULD BE; THE PLAN ADDRESSES THESE VERY ADEQUATELY. HOWEVER, FROM AN POTENTIAL EXPOSURE ROUTE PERSPECTIVE(SEE APPENDIX A LAST PARAGRAPH.) WHAT DOES THE PANEL THINK ABOUT BIO-FILM SAMPLING AS WELL. WHEREAS THE BOTTOM SEDIMENTS WILL BE UNDERFOOT AND A VERY IMPORTANT DERMAL AND LATER WHEN DRY. WIND PARTICLE RE-SUSPENSION BECOMES IMPORTANT. DUE TO THE ORGANIC MATTER IN THE FLOODWATERS BIO-FILMS ARE FORMING ON ALL UNDERWATER SURFACES. THESE ORGANIC MATTER LOCALES ARE GOOD SORPTION SITES(ARE THEY?) FOR HYDROPHOBICS, METALS, PESTICIDES, ETC AS I AM SURE ALL OF YOU ALL FAMILIAR. IS DERMAL CONTACT WITH THESE BIO-FILM SURFACES MORE LIKELY CONTACTED THAN THAT UNDERFOOT SEDIMENT AND DUE TO THE POSSIBILITY OF HIGH OM CONTENT CONTAIN HIGHER CONCENTRATIONS?

- Are the requirements for containers, preservation techniques, sample volumes, and holding times (Table 4-1) appropriate for the listed analyte categories?

OK.
FLOATING DEBRIS (BOTTLES, WOOD, ETC.) COLLECTED IN ZIP LOCK BAGS AND LATER SCRAPED FOR THEIR BIO-FILM FOR ANALYSIS) IS A SUGGESTION.

- Are the analytical methods to be used appropriate for the matrix being sampled?
- The SAB's advice on constituent analysis would also be appreciated.
- Please comment on the adequacy and the transparency of the quality assurance plan and the plan for project documentation.

OK.